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U.S. Army Corps of Engineers Radioactive Waste Program Update

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**Richard Wright, CIH
Safety and Occupational Health Office
HQUSACE**



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Agenda



- **USACE Hazardous, Toxic, Radioactive Waste (HTRW) Program Overview**
- **USACE Radiation Safety Support Team**
- **Disposal Contract Information**
- **Questions**



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USACE HTRW Program Overview

- **USACE HTRW program (environmental restoration) ~ \$1.2 B/yr**
 - Active Installation Restoration/ Formerly Used Defense Sites (FUDS) ~ \$324 M/yr
 - EPA Superfund ~ \$250 M/yr
 - Base Realignment and Closure (BRAC) ~ \$175M/yr



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USACE HTRW Program Overview



- Formerly Utilized Sites Remedial Action Program (FUSRAP) ~ \$140 M/yr
- Army Deactivated Reactor Program
(per Army Regulation 50-7)
- Support for Others - NASA, DOE, FAA, FEMA, etc.



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Frankford Arsenal Issues FUDS



- **NRC identified Frankford as part of the Site Decommissioning and Management Program**
 - Depleted Uranium R&D
 - Radium
- **Ordnance and Explosives**
- **Chemical**



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Frankford Historical Site Assessment



- **Historical Assessment determined 56 buildings to have been impacted by radiological material or operations.**
 - 14 of the 56 had previously been surveyed and free released by the NRC.
 - Of the remaining 42 buildings 22 have been demolished and 20 remain.
- **USACE is performing scoping surveys of the affected areas.**
- **Level of effort of the scoping surveys determined by history of operations at the site.**



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Gulf Nuclear - Superfund



- **Tulsa District using Omaha Rapid Response contract.**
- **Former source manufacturing facility in Webster, TX.**
- **Considered homeland defense concern due to types and activity of abandoned sources.**



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Gulf Nuclear - Superfund



- **Wastes greater than class C. Working with DOE to arrange disposal.**
- **Almost everything is contaminated or a source. Rats with intake of Am-241, Cs-137 have spread contamination via urine.**
- **Segregating wastes to WCS, Richland, NTS, Barnwell, and local RCRA C landfill.**



One of several rooms



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Gulf Nuclear - Superfund



**False wall, hiding sources and
contaminated items**

- **Multiple isotopes identified. Sources were hid behind false walls, in ceiling, and in hidden wells. Hidden rooms have been identified for investigation.**
- **Several rooms are airborne radioactivity areas and portable shielding is required in many areas to reduce dose rates.**



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FUSRAP WORKLOAD

<i>DISTRICT</i>	<i>SITES</i>	<i>FY03-11 (\$-M)</i>
BUFFALO	7	556
ST. LOUIS	4	319
BALTIMORE	1	38
NEW ENGLAND	2	36
NEW YORK	4	198
PHILADELPHIA	1	14
PITTSBURGH	1	TBD
TOTAL	20	1.16

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FUSRAP WORKLOAD



- **Table represents estimated workload by USACE District and FY.**
- **Anticipate that we can achieve program completion by 2011 for a total of \$1.2B; notwithstanding newly added sites.**
- **Finished Madison, Bliss and Laughlin, Ashland 2; finishing Wayne this FY.**



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Wayne Interim Storage Site



- Treated and disposed over 12 M gallons of water.
- Disposed ~ 70,000 CY of material at U.S. Ecology Idaho and Envirocare.
- Final status surveys are complete and demonstrate that the site is suitable for release.
- Site is entering into a groundwater monitoring phase as required in the ROD.

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Wayne Backfill Operation



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Maywood NJ Site



- Photo of soil load out operation

- Feas. Study/ Proposed Plan in draft to regulators.
- Working under an EECA. 30,000 tons of licensable 11e(2) material to be disposed this year (potentially 300,000 tons over the next 6 years).
- Disposal of material at a uranium mill in CO and Envirocare.



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Army Deactivated Reactor Program



- **Ft. Belvoir (SM-1), Ft. Greely (SM-1A), and Sturgis (MH-1A) deactivated reactors (AR 50-7).**
- **Completed disposal of 1700 CY of Ft. Greely waste at US Ecology Richland.**
- **Sturgis “All Hazards Survey” performed; report pending, will provide decommissioning costs/options.**



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Ft. Greely SM-1A



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Sturgis MH-1A



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NASA Plum Brook Reactor Facility



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NASA Plum Brook Reactor Facility



- **PBRF, Sandusky OH, includes 60 MW research test reactor, 100 KW mock-up reactor, both NRC licensed.**
- **USACE developed decommissioning plan approved by NRC March, 2002.**
- **Buffalo District leading decommissioning process in partnership with NASA.**



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USACE Radiation Safety Support Team



- **USACE-wide health physics oversight support, 16 health physicists currently.**
- **Geographically attached to a USACE District /Center, but accessible Corps-wide for both project and program work.**
- **Team coordinator located at the HTRW Center of Expertise, Omaha**



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USACE Radioactive Waste Disposal Contracts



- **Four nationwide contracts; all awarded by Kansas City District.**
- **Available to any federal government agency.**
- **None are requirements contracts for USACE.**
- **Five year contracts (each with an optional five-year extension period).**



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USACE Radioactive Waste Disposal Contracts



- **1998 – Contract awarded to Envirocare**
 - Award value of \$100M.
 - Includes unit disposal rates for LLRW/11e(2).
 - USACE evaluating options for new procurement.
- **1999 – Contracts awarded to Envirocare, US Ecology Idaho, and WCS**
 - Maximum combined total of \$400M.
 - Includes unit disposal rates for low activity materials/LLMW.



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Committees/Workgroups



- **DOD LLRW Disposition Advisory Council**
- **Dept. of Army Radiation Safety Committee**
- **Army Reactor Council Member**
- **Interagency Steering Committee on Radiation Standards (ISCORS), Clean-up Subcommittee**
- **NRC Part 40 Jurisdictional Working Group
(source materials)**



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Questions

Richard Wright, HQUSACE

ATTN: CESO-I

441 G. St., NW

Washington, DC 20314

202-761-8565

richard.l.wright@usace.army.mil